US BUSINESS REVIEW ARTICLE *by Kevin M. McCarthy*

FEATURING VEKA, INC. ISSUE MAY/JUNE 2002

If you have a vinyl window or door, chances are it was made with VEKA vinyl. VEKA is one of the world's leading producers of vinyl extrusions, with more than 30 years experience in the industry. It has facilities in 11 countries and annual sales of more than $800 million, with more than $110 million in the United States.

VEKA manufactures residential and commercial window and door systems for new construction, replacement and remodeling projects. And although it has been producing vinyl extrusions for years, it continues to develop new products.

In 2000, VEKA expanded its product line to include vinyl fence, railing and decking. And now, VEKA Innovations, a division of VEKA Inc., is solely dedicated to producing these items for residential and commercial use. "The vinyl fence, railing and deck market is becoming a mainstream product because of the ever-growing awareness of deforestation, and the demand for alternate products is becoming more and more prevalent," the company says.

The company says the rising cost of lumber also is driving the search for alternatives to wood. "Even though vinyl still has a higher initial cost today, the lower lifecycle cost due to lower maintenance makes vinyl a cost-effective choice," VEKA says.

Today, VEKA's vinyl fence and rail come in 24 different styles, including privacy, post and rail and picket, and VEKA says it is made from the same high-impact, weather resistant PVC as VEKA's window systems.

VEKA's vinyl railing system can be used to replace existing metal or wood railing, or it can be mounted to a new composite or wood porch or deck.

The weather-related benefits offered by the vinyl railing include its ability to block ultraviolet rays. Also, it will never need painting and won't rust, chip, peel, fade, split, splinter, rot or warp. "There are endless possibilities with VEKA Innovations decking, railing and fencing," according to VEKA. "Gazebos, arbors, flower boxes, picnic tables, mail boxes [or] basically anything that is built with wood can also be made with vinyl."

In the residential market, vinyl fencing is becoming a popular landscape feature at the entrance to new subdivisions, and it is becoming a popular landscape ornamentation in the front yards of many homes. But VEKA says vinyl railing is increasingly found on or in commercial buildings, condominiums, hotels and even amusement parks. And, it is also found in U.S. military bases, international airports and on farms and ranches.

VEKA's vinyl decking has all the components of a wood deck - planks, rails and steps. However, its appearance is different than that of wood. "Its overall smooth surface is etched to provide sip resistance," the company says.

In addition, because it is primarily manufactured in three colors - white, almond or gray - vinyl decking can more closely color match the exterior treatment of a building or home. "Vinyl decking can increasingly be found in neighborhood backyards across the country," the company says.

Vinyl fencing first became popular on horse farms. The vinyl provided more "give" than wood to prevent injuries to horses and the product retains no moisture and has not taste. Horses have much less of an urge to eat or chew a vinyl fence than a wood one.

VEKA says that extrusion and co-extrusion are the manufacturing processes used to make vinyl fence and rail products. "After proprietary compounds are made by combining additives with vinyl resin, the product is extruded through molds to form various shapes and is cut into various lengths," the company says.

In the co-extrusion process, modifiers are put on the outer layer to make it weather resistant while other stabilizers for durability are put on the inner core. "Vinyl fencing is either extruded or co-extruded, then shaped into various components by routing and cutting," the company says.

GERMAN ROOTS

The Company's origins go back to the late 1960's when a company called Vekaplast began producing roller shutters in a 15,000 square foot rented facility in Germany. Heinrich Laumann, an employee, saw a growing need for vinyl extrusion in the window and door industry, and he bought Vekaplast in 1971.

In 1974, the company, renamed VEKA, expanded its product line to include residential entry and sliding door systems. By the next few years, more than 10,000 tons of extruded vinyl were produced annually. Sales grew from $1 million in 1969 too more than $20 million by the end of 1977. "At this time, the company began to diversify geographically as the demand for VEKA extrusions increased," the company states. "The farsighted managers recognized the need to expand the established companies on an international scope."

In 1982, VEKA opened in the United States, renting 20,000 square feet of space. Five years later, the company built the industry's first automated computer-controlled compounding and extrusion complex dedicated solely to the window and door market. The Company was recognized for having the world's first computer integrated manufacturing facility for vinyl window and door extrusions. Today, the U.S. division has two branches: one in Fombell, PA and one in Reno, NV.

By 1994, the company had nearly 500,000 square feet of floor space, and a short time later VEKA West was set up in Nevada to focus on the western United States and Canada, along with Mexico and South America. In 2000, the company had to expand its services even further to accommodate the growing demand for vinyl products in Mexico, South American and the Caribbean by establishing VEKA Mexico and VEKA Chile.

Today, VEKA has facilities all over the world, including Iberia, France, the United Kingdom, Poland, Russia, Argentina, Singapore, China and Belgium. With its sales, production and administrative capacities, the company services more than 50 countries.

VEKA says it is one of about five major players in the industry in the United States, and VEKA as about 12 to 15 percent of the market share. "This has been established through international experience, quality products and an unyielding dedication to outstanding service," the company says.

Walter Stucky, president of VEKA USA, says that innovations and producing new, quality models are of vital importance for the company. "Those are the essential ingredients for success in the future," he says. And, Stucky says another vital area is customer service. "From technical response to technical manufacturing, engineering, marketing, research and development, sales support and extrusion, VEKA's service is unmatched in this industry," the company says. "It is a philosophy that we adopted from day one and will continue to offer as long as the name "VEKA" stands. Stucky, who was appointed president in 2001, has been with VEKA since 1987. Before that, he spent 11 years in an extrusion company in Germany. Stucky, who is originally from Germany, has a master's degree in engineering from the University of Stuttgart.

EVOLVING INDUSTRY

VEKA says a major trend occurring among many vinyl window extruders and manufacturers is the branching and experimenting with different products and markets. "VEKA is on the forefront of this development by offering a total product line of entry doors," according to the company.

VEKA's product line includes both single and double-hinged doors that can swing either in our out. Product options include round tops, transoms and sidelights. "Several interior laminates and exterior colors are also offered to enhance the aesthetics and enable the homeowner to personalize the door to their taste preference," the company says.

The company says another trend in the market is the use of cellular PVC, which is produced through a special foam process. It will not rot, chip, peel, flake, warp or absorb moisture, ant it is maintenance free. "The use of this foam process dates back to when manufacturers of storm doors started using die cut foam as an insulator, then began injecting low-density urethane foam into lineal's," the company says. "This experimentation has enabled us to have the ability to create cellular PVC in thick walled and solid foam shapes."

The company says wood and solid foam have a very similar appearance. "By far, a large majority of wood windows sold are painted a primer white; therefore, a solid foam window takes on the same appearance as a wood window painted white, "the company says. "[A window constructed with cellular PVC] will give the customer the same look and feel of a wood window, minus the high maintenance that wood windows require."

A third trend, according to VEKA, is the increased us of wood veneers in the vinyl window industry. "[Our company] is knows for its laminates, which simulates veneer but is not nearly as expensive," the company says.

VEKA also offers a vinyl paintable/stainable woodgrain laminate. "Due to thin layers of fiber absorbents, the paintable/stainable laminate simulates a traditional wood surface and can be painted or stained to any color," the company says. "Pine is a recent addition to VEKA's paintable/stainable laminate collection, while oak has been available for some time. Vinyl woodgrain laminates are a predetermined series of woodgrain laminations that resemble different types of wood. This type of laminations requires no additional finishing and there is no need to paint or stain the product.

"VEKA's vinyl laminations is maintenance free and warranted from cracking, rotting, chipping, peeling or flaking. Options such as these enable the customer to differentiate its product from the limited extruded colors usually associated with vinyl windows and doors."

VEKA says improvements of vinyl window and door products are some of the reasons that vinyl's market share has increased in the past and will continue to grow. "Through capital investments and a constant awareness of the changing market, EKA prides itself on being a leader in the industry," the company says. "We have had a major role in developing new technology and expanding the range of products that are available to the consumer.

VALUABLE VINYL

Today, vinyl is the second largest selling plastic in the world. The vinyl industry now employs more than 100,000 in the United States, according to VEKA.

Vinyl, which is referred to as the "infrastructure" plastic, is used to frequently in industries ranging from automotive to windows because of its low cost and versatility. VEKA says that the largest use for vinyl is in construction and finishing products that are used for residential and commercial building. "Vinyl construction products typically are selected for their durability, ease of installation, easy maintenance and appeal to consumers," according to VEKA. "In many applications, vinyl ahs replaced traditional materials such as wood, copper and aluminum."

VEKA says that studies have shown how vinyl products are more cost effective in comparison to other building products. For example, taking into account installation costs and maintenance for 20 years, a 1996 study found that one three-foot by four-foot wood double-hung window costs about 10 percent more than a vinyl one. That cost is more significant if you consider the average home has 15 windows.

"Very little maintenance is required with vinyl windows and glass doors," the company says. "They may require a periodic cleaning with a standard household cleaner but will never need to be painted, stained or otherwise treated to maintain their color and strength. And unlike other materials, vinyl windows will not chip, corrode, crack, peel or rot."

VEKA says vinyl is strong, durable and resistant to abrasion and moisture. It also can withstand rust and corrosion, is electrically non-conductive and has good fire performance properties. “Because it is less than half petroleum, vinyl is the most energy-efficient plastic,” the company says. “And because it has been used for more than half century, it is one of the world’s most analyzed and tested materials.” It was originally developed by scientists in the 1920’s, who had no idea at the time that product would amount to so much.

Vinyl is composed of two simple building blocks - chlorine, based on common salt, and ethylene, from crude oil. The resulting compound is ethylene dichloride, which is converted at a very high temperature to vinyl chloride monomer (VCM) gas. Through a chemical reaction called polymerization, VCM turns into a stable powder, polyvinyl chloride resin.

COMMON CHOICE FOR BUILDING

The advantages of using vinyl are making it an increasingly popular choice in construction. VEKA says that in the 1980’s sales of vinyl windows increased dramatically. In fact, from 1992 to 1998, the sales of vinyl windows in residential new construction and remodeling jumped by nearly 125 percent. “Today, most of the major wood window manufacturers offer vinyl windows as well, and vinyl rivals traditional materials for aesthetics, durability, energy efficiency and value,” according to VEKA.

Innovations in vinyl are continually giving new design flexibility to architects and builders, such as the recently introduced wood-vinyl composite that is made up of woodflour and vinyl. “This product can be embossed, has the appearance and feel of wood and can even be stained or painted,” the company says.

However, VEKA says that proper installation, with vinyl products or other materials, is critical for energy efficiency and the best performance. “Some of the possible installation mistakes on vinyl windows and doors include creating openings that are too large, improper flashing, improper choice of anchorage or too much space between fasteners,” VEKA says.

The American Architectural Manufacturers Association has even developed an Installer Training Qualification program for doors and widows, where installers have to take a training course and need to pass a final exam. “[The certification allows] builders to assure their clients that professionals accredited to the work have installed the windows,” the company says.

ACHIEVEMENTS

VEKA has been recognized on numerous occasions for its various accomplishments, and it was recognized in 2001 for an environmental program geared at protecting natural resources.

The company says it used to generate hazardous wastewater in its process of cleaning vinyl extrusion dies, but it does not anymore. With the company’s rapid growth, VEKA says its hazardous waste generation jump form 51,000 pounds in 1999 to nearly 81,000 in 2000.

In early 2000, VEKA initiated a project to reduce its hazardous waste. After exploring various approaches, VEKA’s research team decided product substitution was the best way to do this. “By replacing its sodium hydroxide-based cleaner with a non-hazardous cleaner, VEKA found that it could recycle its wastewater and eliminate the hazardous component of the residual wastewater,” according to the company.

During the last quarter of 2000 and first quarter of 2001, VEKA did not generate any hazardous wastewater in its die-cleaning process. “Adding the re-circulation pump and filter to the existing systems cost less than $500, but the simple modifications will save VEKA more than $24,000 annually and eliminate more than 107,000 pounds of hazardous waste,” the company says.

In addition to its environmental efforts, VEKA employees are actively involved in community organizations. The company supported the local YMCA by donating a three-car train to Fombell’s Kon-O-Kwee, which serves children with various special needs. “The train was used about five years ago to tour people around our newly renovated facility during a grand opening celebration,” the company says.

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